



October 26, 2017

Mr. Anthony Krone  
Risk Manager  
Shelby County Schools  
160 South Hollywood – Room 152  
Memphis, Tennessee 38112

**RE:   Lead in Drinking Water Sampling  
      Manassas High School  
      1111 Manassas St  
      Memphis, Tennessee  
      Tioga Project No.: 24816.03**

Dear Mr. Krone,

At the request of Shelby County Schools (the Client), Tioga Environmental Consultants (Tioga) performed sampling of drinking water sources at the above referenced school for laboratory analysis of total lead concentrations. At the request of the Client, sampling was conducted on potable water sources in the kitchen and water fountains throughout the first floor of the school. Sampling was conducted early in the morning, before any potable water sources had been used for the day and prior to the arrival of any students or faculty.

On October 10, 2017, Tioga representative Phillip Gardner arrived onsite and was escorted through the building by Shelby County Schools risk management personnel. First-draw potable water samples were collected in accordance with the Environmental Protection Agency (EPA) regulations codified in 40 CFR 141.86, and were documented and transferred under chain-of-custody protocol to Waypoint Analytical Laboratories in Memphis, Tennessee for analysis of total lead content.

**Results Based on Laboratory Analysis:**

Table 1 on the following page summarizes the sampling locations, laboratory analytical results, and EPA action level for lead in drinking water. Sample results with a "<" symbol did not contain lead content above the laboratory detection limit.

**Down-to-earth partners. Sky's-the-limit solutions.**

**Table 1**  
**Summary of Analytical Results**  
**Manassas High School**  
**October 10, 2017**

Sample ID	Sample Location	Total Lead (µg/L)	EPA Action Level (µg/L)
56-1	Main Kitchen Sink	4.27	15
56-2	Low Cooler in Cafeteria	<0.500	
56-3	High Cooler in Gym By Mens Locker Room	<0.500	
56-4	High Cooler in Gym By Womens Locker Room	<0.500	
56-5	Low Cooler Outside of Gym	<0.500	
56-6	High Cooler by Room 1169	<0.500	
56-7	Low Cooler by Room 1093	<0.500	

(µg/L) = Micrograms of lead per liter of water (parts per billion)

A review of the laboratory analytical results of the water samples collected revealed that no water samples collected during this sampling event exhibited total lead levels above the EPA action level for drinking water.

**Recommendations:**

Based upon the laboratory analytical results of the seven potable water samples collected from Manassas High School, Tioga has found no evidence of elevated lead concentrations above the EPA action level for drinking water, and therefore makes no recommendation for further testing at this site.

**Limitations**

Potable water sources with elevated lead levels may potentially be present in areas of the property that are not addressed with this report. This investigation only included the potable water sources specifically addressed.

We appreciate the opportunity to provide you with this service. Should you have any questions regarding this report, please contact me at (901) 791-2432.

Sincerely,

**TIOGA ENVIRONMENTAL CONSULTANTS, INC.**



Margaret F. Strom, QEP, CHMM  
President

**Enclosure: (1) Laboratory Analytical Report**

10/20/2017

Tioga Environmental Consultants  
Ms. Maggie Strom  
357 N. Main Street  
Memphis, TN, 38103

Ref: Analytical Testing  
Lab Report Number: 17-285-0204  
Client Project Description: Site 56  
Project #24816.03

Dear Ms. Maggie Strom:  
Waypoint Analytical, Inc. received sample(s) on 10/11/2017 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2012) and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,



Andy Parrish  
Project Manager

*Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.*

Alabama #40750	Louisiana #04015	VA NELAP #460181	Texas #T104704180-11-6	Arkansas #88-0650
Mississippi	California #2904	NC #415	Oklahoma #9311	Virginia #00106
Kentucky #90047	Tennessee #TN02027	EPA #TN00012	Kentucky UST #41	



06510

Tioga Environmental Consultants  
Ms. Maggie Strom  
357 N. Main Street  
Memphis , TN 38103

Project Site 56  
Information : Project #24816.03

Report Date : 10/20/2017

Report Number : **17-285-0204**

**REPORT OF ANALYSIS**

Received : 10/11/2017

Lab No : **91022**

Sample ID : **56-1**

Matrix: **Aqueous**

Sampled: **10/10/2017 14:25**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Lead	<b>4.27</b>	µg/L	0.500	1	10/17/17 14:09	BKN	EPA-200.8

Lab No : **91023**

Sample ID : **56-2**

Matrix: **Aqueous**

Sampled: **10/10/2017 14:28**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Lead	<0.500	µg/L	0.500	1	10/17/17 14:11	BKN	EPA-200.8

Lab No : **91024**

Sample ID : **56-3**

Matrix: **Aqueous**

Sampled: **10/10/2017 14:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Lead	<0.500	µg/L	0.500	1	10/17/17 14:12	BKN	EPA-200.8

Lab No : **91025**

Sample ID : **56-4**

Matrix: **Aqueous**

Sampled: **10/10/2017 14:37**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Lead	<0.500	µg/L	0.500	1	10/17/17 14:13	BKN	EPA-200.8

**Qualifiers/  
Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit

06510

Tioga Environmental Consultants  
Ms. Maggie Strom  
357 N. Main Street  
Memphis , TN 38103

Project Site 56  
Information : Project #24816.03

Report Date : 10/20/2017

Report Number : **17-285-0204**

**REPORT OF ANALYSIS**

Received : 10/11/2017

Lab No : **91026**

Sample ID : **56-5**

Matrix: **Aqueous**

Sampled: **10/10/2017 14:40**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Lead	<0.500	µg/L	0.500	1	10/17/17 14:18	BKN	EPA-200.8

Lab No : **91027**

Sample ID : **56-6**

Matrix: **Aqueous**

Sampled: **10/10/2017 14:43**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Lead	<0.500	µg/L	0.500	1	10/17/17 14:20	BKN	EPA-200.8

Lab No : **91028**

Sample ID : **56-7**

Matrix: **Aqueous**

Sampled: **10/10/2017 14:48**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Lead	<0.500	µg/L	0.500	1	10/17/17 14:21	BKN	EPA-200.8

**Qualifiers/  
Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit

## Cooler Receipt Form

Customer Number: **06510**

Customer Name: **Tioga Environmental Consultants**

Report Number: **17-285-0204**

### Shipping Method

<input type="radio"/> Fed Ex	<input type="radio"/> US Postal	<input type="radio"/> Lab	<input type="radio"/> Other :	<input type="text"/>
<input type="radio"/> UPS	<input checked="" type="radio"/> Client	<input type="radio"/> Courier	Thermometer ID:	<input type="text" value="NA"/>

Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Number of coolers received	<input type="text" value="1"/>		
Custody seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Water - Sample containers properly preserved	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 – compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
<input type="checkbox"/> High concentration container (48 hr)	<input type="checkbox"/> Low concentration EnCore samplers (48 hr)		
<input type="checkbox"/> High concentration pre-weighed (methanol -14 d)	<input type="checkbox"/> Low conc pre-weighed vials (Sod Bis -14 d)		
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:

Signature:

Date & Time:

Client Name/Address			Client Project Manager/Contact		Billing Information		For Laboratory Use Only			
Project Description			Project/Site Location (City/State)		Method of Shipment		Matrix Key			
Project Number			Project Manager Phone #		Project Manager Email		Purchase Order Number		Site/Facility ID #	
Waypoint ANALYTICAL 2790 Whitten Road Memphis, TN 38133 (901) 213-2400			24816.03		901-791-2432		mstrane@bgaenv.com		56	
Sample Identification			Number of Containers		Matrix (Refer to Key)		(G)rab or (C)omposite		Required Analysis / P	
Date	Time	Sample Identification	Number of Containers		Matrix (Refer to Key)		(G)rab or (C)omposite		Required Analysis / P	
10/10/17	1425	56-1	1		DWG		X			
1428		56-2	1							
1435		56-3	1							
1437		56-4	1							
1440		56-5	1							
1443		56-6	1							
1448		56-7	1							
Custody Seals Y/N			Lab Comments		Sampled by (Name - Print)		Client Remarks/Comments		Date Time	
Y/N					Phillip Gardner				10/11/17 1144	
Blank/Cooler Temp					Relinquished by: (SIGNATURE)		Received by: (SIGNATURE)		Date Time	
					Kathy Green		Kathy Green		10/11/17 1144	
					Relinquished by: (SIGNATURE)		Received by: (SIGNATURE)		Date Time	
					Kathy Green		Kathy Green		10/11/17 1311	
					Relinquished by: (SIGNATURE)		Received by: (SIGNATURE)		Date Time	
					Kathy Green		Kathy Green		10/11/17 1311	